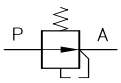
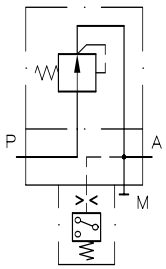
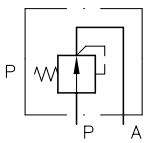
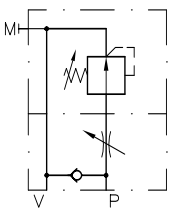
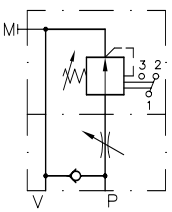
Pressure reducing valves type CDK, DK, and DZ

The task of pressure reducing valves in a hydraulic circuit is to maintain a rather constant outlet pressure despite a higher and changing inlet pressure. These valves are usually used when a secondary circuit has to be fed with a lower but constant pressure level by a main (primary) circuit with a higher and varying pressure level.
The pressure reducing valve illustrated here is directly controlled. This valve type CDK does not show any leakage when closed and therefore a leakage port is not required as is with other conventional pressure reducing valves which act like a spool valve and always do show design related leakage. A override compensation is not possible with type CDK, as this valve is designed as a seated valve.
A reversal of the direction of flow is possible up to approx. 2 x Q_{max} .
A further benefit of type CDK is the mounting hole, which can be easily manufactured (see dimensions).
Special feature of type DK is the tracked pressure switch, where setting of pressure and switch takes place simultaneously via only one adjustment device.

Nomenclature:	Pressure reducing valve (2-way valve)
Design:	Screw-in valve Combination with a connection block for: • Pipe connection • Manifold mounting
Adjustability:	Tool adjustable Manually adjustable
p_{max} :	500 bar
Q_{max} :	22 lpm

Basic types and general parameters

Basic type and size	Brief description	Pressure range: $p_{max\ A}$ (bar)	Flow Q_{max} (lpm)	Tapped ports (BSPP)	Symbol
CDK 3 - ...	Screw-in valve				
CDK 3-..-1/4-DG3.	Version for pipe connection, a pressure switch type DG 3. May be installed as option (see also “Additional information”), additional port for pressure gauge	**..-08**: 450 **..-081**: 500 **..-1**: 300 **..-11**: 380 **..-2**: 200 **..-21**: 250	6 ... 22	G 1/4 version for pipe connection	
CDK 3-..-P	Manifold mounting valve	**..-5**: 130 **..-51**: 165			
DZ ...	Manifold mounting valve, optional with orifice/throttle and by-pass check valve				**DZ** 
DK ...	Manifold mounting valve with tracked pressure switch				**DK** 

Additional versions

- Version with reduced dependancy on varying pump pressure, intended for low set pressure (type CDK 32)
- Version with reduced back pressure (type CDK 35)

Order examples

CDK 3 - 2 - 180

Pressure reducing valve, screw-in valve, pressure range 20 to 200 bar (coding 2), tool adjustable version pre-set to 180 bar

CDK 3 - 5R - 1/4 - 100

Pressure reducing valve, pipe connection (G 1/4 (BSPP)), pressure range 15 to 130 bar (coding 5), manually adjustable version (coding R), pre-set to 100 bar

CDK 3 - 1 - P

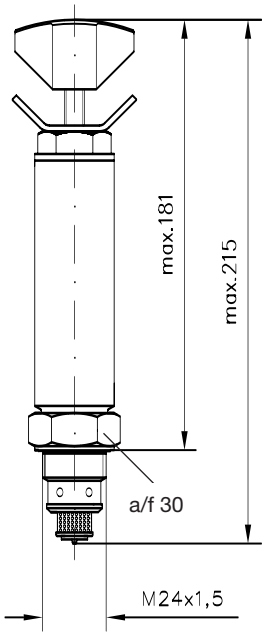
Pressure reducing valve, manifold mounting, pressure range 30 to 300 bar (coding 1), tool adjustable version pre-set to max. pressure (300 bar; no pressure specification)

DK 2/160/4R

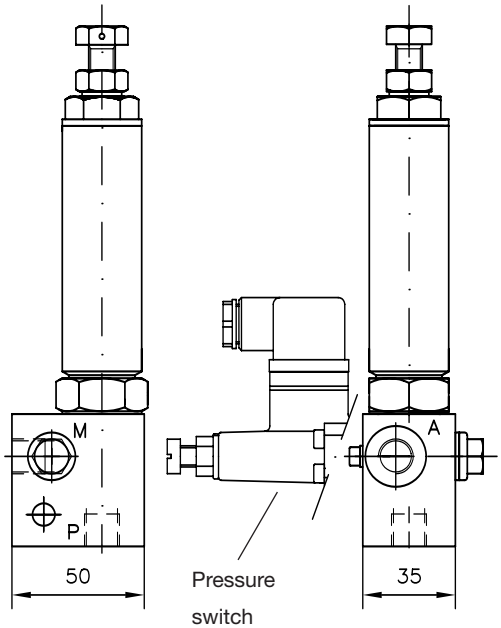
Pressure reducing valve with tracked pressure switch as manifold mounting valve, pressure range 30 to 200 bar (coding 2, set to 160 bar), with throttle in port P (coding 4) and by-pass check valve (coding R)

Dimensions

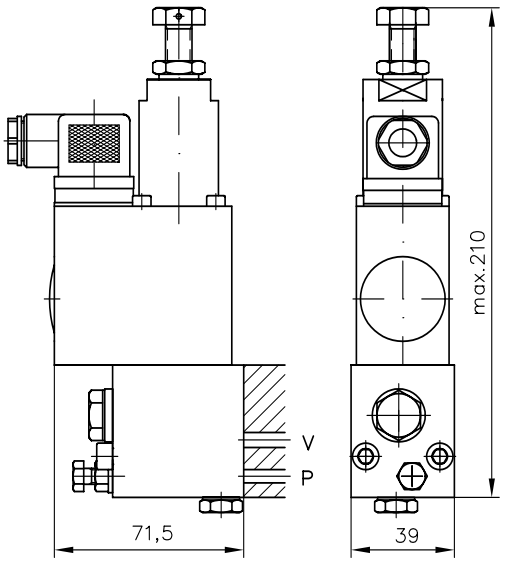
Cartridge valve type CDK 3..



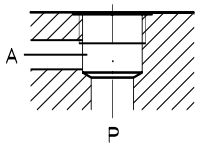
Type CDK 3.. incl. connection block for pipe installation



Type DK 2.. manifold mounting



Mounting hole



All dimensions in mm, subject to change without notice!

Version	Mass m (kg)
Screw-in valve	0.7
Combination with connection block for pipe connection	1.25
Combination with connection block for manifold mounting	1.1

Additional information

- Pressure reducing valves type CDK — D 7745
  type ADM — D 7120
  type VDM, VDX — D 5579
- Miniature pressure reducing valves type ADC etc. — D 7458
- Pressure reducing valve with tracked pressure switch type DK — D 7941
- Intermediate plate NG 6 type NZP — D 7788 Z
- Prop. pressure reducing valves type PDM — D 7584/1, D 7486
- Pressure switch type DG 3.., DG 5 E — D 5440, D 5440 E/1
- See also section “Devices for special applications” (Screw-in valves and installation kits)

For page and section of the devices additionally listed, see type index